(FILE 'HOME' ENTERED AT 13:20:20 ON 04 JUN 2003)

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FILE 'REGISTRY' ENTERED AT 13:20:34 ON 04 JUN 2003
              1 S ISOBORNYL METHACRYLATE/CN
L1
L2
              1 S ISOBORNYL ACRYLATE/CN
L3
           1282 S 7534-94-3/CRN
L4
           1617 S 5888-33-5/CRN
L5
           2889 S L3 OR L4
           2881 S L5 AND ACID
              0 S L6 AND GLYCYDYL
L8
          10564 S GLYCIDYL
L9
            106 S L8 AND L6
L10
              2 S L6 AND OXETAN
L11
              9 S L6 AND OXETAN?
     FILE 'CA' ENTERED AT 13:24:07 ON 04 JUN 2003
L12
              6 S L11
L13
             87 S L9
             20 S L9 AND PHOTO?
L14
L15
            182 S L5 AND GLYCIDYL
L16
             38 S L15 AND PHOTO?
L17
             22 S L16 NOT L14
L18
            188 S L5 AND GLYCIDYL?
             40 S L5 AND GLYCIDYL? AND PHOTO?
L19
L20
              2 S L19 NOT L16
```

=> log y

STN Database Searches Cited in Search Notes Do Not Remove from File Cymb Hamber

FILE 'REGISTRY' ENTERED AT 13:46:33 ON 04 JUN 2003 USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT. PLEASE SEE "HELP USAGETERMS" FOR DETAILS. COPYRIGHT (C) 2003 American Chemical Society (ACS) Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem. STRUCTURE FILE UPDATES: 3 JUN 2003 HIGHEST RN 524916-37-8 DICTIONARY FILE UPDATES: 3 JUN 2003 HIGHEST RN 524916-37-8 TSCA INFORMATION NOW CURRENT THROUGH JANUARY 6, 2003 Please note that search-term pricing does apply when conducting SmartSELECT searches. Crossover limits have been increased. See HELP CROSSOVER for details. Experimental and calculated property data are now available. See HELP PROPERTIES for more information. See STNote 27, Searching Properties in the CAS Registry File, for complete details: http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf => s 249903-81-9 1 249903-81-9 (249903-81-9/RN) => d ANSWER 1 OF 1 REGISTRY COPYRIGHT 2003 ACS L1RN249903-81-9 REGISTRY 2-Propenoic acid, 2-methyl-, 2-(3-ethyl-3-oxetanyl)ethyl ester, polymer CN with ethenylbenzene, methyl 2-methyl-2-propenoate, oxiranylmethyl 2-methyl-2-propenoate and rel-(1R,2R,4R)-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl 2-propenoate (9CI) (CA INDEX NAME) OTHER CA INDEX NAMES: 2-Propenoic acid, (1R,2R,4R)-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl ester, rel-, polymer with ethenylbenzene, 2-(3-ethyl-3-oxetanyl)ethyl 2-methyl-2-propenoate, methyl 2-methyl-2-propenoate and oxiranylmethyl 2-methyl-2-propenoate (9CI) 2-Propenoic acid, 2-methyl-, methyl ester, polymer with ethenylbenzene, CN2-(3-ethyl-3-oxetanyl)ethyl 2-methyl-2-propenoate, oxiranylmethyl 2-methyl-2-propenoate and rel-(1R,2R,4R)-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl 2-propenoate (9CI) 2-Propenoic acid, 2-methyl-, oxiranylmethyl ester, polymer with CNethenylbenzene, 2-(3-ethyl-3-oxetanyl)ethyl 2-methyl-2-propenoate, methyl 2-methyl-2-propenoate and rel-(1R,2R,4R)-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl 2-propenoate (9CI) CN Benzene, ethenyl-, polymer with 2-(3-ethyl-3-oxetanyl)ethyl 2-methyl-2-propenoate, methyl 2-methyl-2-propenoate, oxiranylmethyl 2-methyl-2-propenoate and rel-(1R,2R,4R)-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl 2-propenoate (9CI) FS STEREOSEARCH MF (C13 H20 O2 . C11 H18 O3 . C8 H8 . C7 H10 O3 . C5 H8 O2)x CI PCT Polyacrylic, Polyether, Polyether formed, Polystyrene SR LC STN Files: CA, CAPLUS

CM 1

CRN 249903-80-8 CMF C11 H18 O3

CM 2

CRN 5888-33-5 CMF C13 H20 O2

Relative stereochemistry.

CM 3

CRN 106-91-2 CMF C7 H10 O3

CM 4

CRN 100-42-5 CMF C8 H8

$$H_2C = CH - Ph$$

CM 5

CRN 80-62-6 CMF C5 H8 O2

1 REFERENCES IN FILE CA (1957 TO DATE)

1 REFERENCES IN FILE CAPLUS (1957 TO DATE)

=> log y COST IN U.S. DOLLARS

SINCE FILE

TOTAL

FULL ESTIMATED COST

ENTRY

SESSION

2.48

2.69

```
ANSWER 9 OF 20 CA COPYRIGHT 2003 ACS
L14
     136:393285 CA
AN
     Photosolder resist composition for printed circuit boards
ΤI
     Yabuuchi, Naoya; Fujita, Minoru; Namba, Osamu; Okajima, Keiichi
IN
     Nippon Paint Co., Ltd., Japan
PA
     Eur. Pat. Appl., 14 pp.
SO
     CODEN: EPXXDW
DT
     Patent
     English
LA
     ICM G03F007-033
IC
     ICS G03F007-038
     74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other
CC
     Reprographic Processes)
     Section cross-reference(s): 37, 38, 76
FAN.CNT 1
                                           APPLICATION NO.
                                                            DATE
     PATENT NO.
                      KIND DATE
                                           -----
     EP 1207424
                       A1
                            20020522
                                           EP 2001-127225
                                                             20011116
PΙ
         R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
             IE, SI, LT, LV, FI, RO, MK, CY, AL, TR
                                           JP 2001-335994
                                                             20011101
     JP 2002236363
                       A2
                            20020823
                                           US 2001-988036
                                                             20011116
     US 2002090573
                       A1
                            20020711
PRAI JP 2000-351298
                       Α
                            20001117
     JP 2001-335994
                       Α
                            20011101
    A photosolder resist compn. of the invention is characterized by
AB ·
     contg. (A) a resin contg. radical polymn. groups and carboxyl groups
     obtained by adding a cyclic ether group of a cyclic ether group-contg.
     vinyl monomer to a carboxylic group of a radical copolymer contg. at least
     isobornyl (meth)acrylate acrylate and a carboxyl group-contg. vinyl
     monomer as monomer units; (B) an inorg. filler; and (C) a
     photocurable mixt. of a polyfunctional acrylic monomer (c1), a
     cyclic ether group-contg. compd. (c2), and a photopolymn.
     initiator (c3). The photosolder resist compns. according to the
     present invention were found excellent in the development property, in
     elec. insulating property, solder heat resistance, gold plating resistance
     and thermal impact resistance.
ST
     printed circuit board photosolder resist compn
     Butadiene rubber, uses
IT
     RL: TEM (Technical or engineered material use); USES (Uses)
        (epoxidized, Epoleed PB 3600; photosolder resist compn. for
        printed circuit boards)
IT
     Photoresists
     Printed circuit boards
        (photosolder resist compn. for printed circuit boards)
IT
     105809-30-1
     RL: TEM (Technical or engineered material use); USES (Uses)
        (M 208; photosolder resist compn. for printed circuit boards)
IT
     4687-94-9, VR 77
     RL: TEM (Technical or engineered material use); USES (Uses)
        (VR 77; photosolder resist compn. for printed circuit boards)
ΙT
     9003-17-2
     RL: TEM (Technical or engineered material use); USES (Uses)
        (butadiene rubber, epoxidized, Epoleed PB 3600; photosolder
        resist compn. for printed circuit boards)
IT
     100752-97-4, Diethylthioxanthone
     RL: CAT (Catalyst use); TEM (Technical or engineered material use); USES
     (Uses)
        (photopolymn. initiator; photosolder resist compn.
        for printed circuit boards)
     71868-10-5, Irgacure 907
     RL: CAT (Catalyst use); TEM (Technical or engineered material use); USES
        (photosolder resist compn. for printed circuit boards)
     428505-57-1P, Glycidyl methacrylate-isobornyl methacrylate-
IT
```

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ANSWER 1 OF 2 CA COPYRIGHT 2003 ACS
L1
AN
     124:356233 CA
    Alkali-developable photoresist composition for preparing circuit boards
TI
     Shioda, Atsushi; Hashimoto, Kazumi; Chiba, Hideki
IN
     Japan Synthetic Rubber Co Ltd, Japan
PA
     Jpn. Kokai Tokkyo Koho, 16 pp.
SO
     CODEN: JKXXAF
DT
     Patent
     Japanese
LA
TC
     ICM G03F007-038
     ICS G03F007-027; G03F007-028; G03F007-032; H05K003-06; H05K003-18;
         H05K003-28
     74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other
CC
     Reprographic Processes)
     Section cross-reference(s): 76
FAN.CNT 1
                                           APPLICATION NO.
     PATENT NO.
                     KIND DATE
                                                           DATE
                     ---- •-----
                                           -----
                                                           _____
     ______
                      A2 19960202
                                           JP 1994-185346
PΙ
     JP 08029980
                                                            19940714 <--
PRAI JP 1994-185346
                           19940714
     The title photoresist compn. contains (a) an unsatd. group-contg.
     polycarboxylic acid resin prepd. by reaction of a copolymer of unsatd.
     carboxylic acids and other radically polymg. compds. with an epoxy
     group-contg. radically polymg. compd., (b) a polymg. compd. having
     .gtoreq.1 ethylenic unsatd. double bond, and (c) a photopolymn. initiator.
     The compn. shows good alkali-developability, high resoln. even if its film
     is thick, and improved resistance to plating, chems., and soft solder.
     Thus, a photoresist compn. comprised a resin prepd. by reaction of
     methacrylic acid-dicyclopentanyl methacrylate-butadiene copolymer with
     glycidyl methacrylate, Aronix M-8060 (monomer), and Irgacure 369
     (photopolymn. initiator).
     polycarboxylic acid resin photoresist; circuit board photoresist compn
ST
IT
     Resists
        (photo-, alkali-developable photoresist compn. contg. unsatd.
       polycarboxylic acid resin)
                  177017-78-6P
     177017-77-5P
                                   177017-79-7P
                                                  177017-80-0P
                                                                 177017-81-1P
IT
                   177017-83-3P
                                  177017-84-4P
                                                  177017-85-5P
     177017-82-2P
    RL: PNU (Preparation, unclassified); TEM (Technical or engineered material
     use); PREP (Preparation); USES (Uses)
        (alkali-developable photoresist compn. contg. unsatd. polycarboxylic
        acid resin)
     15625-89-5, Kayarad TMPTA
IT
                                62886-89-9, Aronix M 8060 64401-02-1
     93294-97-4, Kayarad DPCA 60
     RL: TEM (Technical or engineered material use); USES (Uses)
        (alkali-developable photoresist compn. contg. unsatd. polycarboxylic
        acid resin)
=> D ALL 2
     ANSWER 2 OF 2 CA COPYRIGHT 2003 ACS
L1
AN
     108\178503 CA
ΤI
     Dielectric ceramics
ΙN
     Yokoya, Yoichiro; Kato, Junichi; Mihara, Toshihiro
     Matsushita Electric Industrial Co., Ltd., Japan
PA
SO
     Jpn. Kokai Tokkyo Koho, 4 pp.
     CODEN: JKXXAF
DT
     Patent
LA
     Japanese
IC
     ICM C04B035,-46
         C04B035 \ 00; H01B003-12
     ICS
ICA
    H01G004-12
CC
     76-10 (Electric Phenomena)
```

Section cross-reference(s): 57